Mr. Bill Miller
NTN Driveshaft, Incorporated
8221 South International Drive
Columbus, Indiana 47201

Dear Mr. Miller:

Re: Exempt Construction and Operation Status,
005-11802-00066

The application from NTN Driveshaft, Inc., received on January 25, 2000, has been reviewed. Based on the data submitted and the provisions in 326 IAC 2-1.1-3, it has been determined that the following water heating boiler, to be located at 8251 South International Drive, Indiana, is classified as exempt from air pollution permit requirements:

One (1) natural gas fired water heating boiler, identified as B5, rated at 0.48 million British thermal units (MMBtu) per hour, exhausting at one (1) stack, identified as B5.

The following conditions shall be applicable:

(1) Pursuant to 326 IAC 5-1-2 (Opacity Limitations) except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following:

(a) Opacity shall not exceed an average of forty percent (40%) in any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of 15 minutes (60 readings) in a 6-hour period as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuos opacity monitor in a six (6) hour period.

(2) Pursuant to 326 IAC 6-2-4(a)(Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the particulate matter emissions from the 0.48 MMBtu per hour boiler (B-5) shall not exceed 0.6 pounds of PM per MMBtu.

This existing source is required to submit a timely Minor Source Operating Permit application to meet all applicable requirements of 326 IAC 2. The equipment being reviewed under this permit shall be incorporated in the submitted Minor Source Operating Permit application.

An application or notification shall be submitted in accordance with 326 IAC 2 to the Office of Air Management (OAM) if the source proposes to construct new emission units, modify existing emission units, or otherwise modify the source.

Sincerely,

Paul Dubenetzky, Chief
Permits Branch
Office of Air Management

MMG

cc: File -Bartholomew County
Bartholomew County Health Department
Air Compliance - D.J. Knotts
Permit Tracking - Janet Mobley
Technical Support and Modeling - Michele Boner
Compliance Data Section - Karen Nowak

Indiana Department of Environmental Management
Office of Air Management

Technical Support Document (TSD) for an Exemption

Source Background and Description

Source Name: **NTN Driveshaft, Incorporated**
Source Location: **8251 South International Drive, Columbus, Indiana 47201**
County: **Bartholomew**
SIC Code: **3568**
Operation Permit No.: **005-11802-00066**
Permit Reviewer: **Melissa Groch**

The Office of Air Management (OAM) has reviewed an application from NTN Driveshaft, Inc., relating to the construction and operation of a water heating boiler.

Permitted Emission Units and Pollution Control Equipment

The source consists of the following permitted emission units and pollution control devices:

One (1) natural gas fired water heating boiler, identified as B5, rated at 0.48 million British thermal units (MMBtu) per hour, exhausting at one (1) stack, identified as B5.

Existing Approvals

The source has been operating under previous approvals including, but not limited to, the following:

(a) Registration 005-8803-00066, issued on October 13, 1997;

(b) Construction Permit 005-6484-00066, issued on January 16, 1997;

(c) Amendment 005-7177-00066, issued on December 3, 1996;

(d) Construction Permit 005-4612-00066, issued on September 12, 1996; and

(e) Registered Construction and Operation Status, issued September 1, 1989.

All conditions from the previous approvals will be reviewed upon receipt of this source's MSOP application.

Stack Summary

Stack ID	Operation	Height	Diameter	Flow Rate (acfm)	Temperature (^{0}F)
B5	water heating boiler	31 inches	9 inches	not available	250

Enforcement Issue

(a) IDEM is aware that the source will be submitting a Minor Source Operating Program Application. The source is currently operating pursuant to the permits listed in this Technical Support Document under the condition entitled *Existing Approvals*.

(b) There are no enforcement actions pending.

Recommendation

The staff recommends to the Commissioner that the construction and operation be approved. This recommendation is based on the following facts and conditions:

Unless otherwise stated, information used in this review was derived from the application and additional information submitted by the applicant.

An application for the purposes of this review was received on January 25, 2000, with additional information received on April 13, 2000.

Emission Calculations

The calculations submitted by the applicant have been verified and found to be accurate and correct. These calculations are provided in Appendix A of this document, page 1 of 1.

Potential To Emit of Boiler B5

Pursuant to 326 IAC 2-1.1-1(16), Potential to Emit is defined as "the maximum capacity of a stationary source or emissions unit to emit any air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of a source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or type or amount of material combusted, stored, or processed shall be treated as part of its design if the limitation is enforceable by the U.S. EPA, the department, or the appropriate local air pollution control agency."

Pollutant	Potential To Emit (tons/year)
PM	0.004
PM-10	0.016
SO_2	0.001
VOC	0.012
CO	0.177
NO_x	0.210
HAP(s)	single less than 10, combination less than 25

(a) The potential to emit of any of the criteria pollutants above for boiler B5 are less than the thresholds requiring construction approval, or registration approval for this equipment. Therefore, boiler B5 is considered as exempt.

(b) The potential to emit (as defined in 326 IAC 2-7-1(29)) of any single HAP is less than ten (10) tons per year and/or the potential to emit (as defined in 326 IAC 2-7-1(29)) of a combination HAPs is less than to twenty-five (25) tons per year. Therefore, the source is not subject to the provisions of 326 IAC 2-7.

Actual Emissions

The following table shows the actual emissions from the entire source. This information reflects the 1998 OAM emission data.

Pollutant	Actual Emissions (tons/year)
PM	0.594
PM-10	0.595
SO_2	0.119
VOC	1.073
CO	3.96
NO_x	19.8
HAP (specify)	not available

Limited Potential to Emit

The table below summarizes the total potential to emit, reflecting all limits, of the emission unit.

	Limited Potential to Emit (tons/year)						
Facility	PM	PM-10	SO_2	VOC	CO	NO_X	HAPs
Boiler B5	326 IAC 6-2-4	0.016	0.001	0.012	0.177	0.210	single less than 10 , combination less than 25
Total B5 Emissions	0.29 lb/hr	0.016	0.001	0.012	0.177	0.210	negligible

County Attainment Status

The source is located in Bartholomew County.

Pollutant	Status
PM-10	attainment
SO_2	attainment
NO_2	attainment
Ozone	attainment
CO	attainment
Lead	attainment

(a) Volatile organic compounds (VOC) and oxides of nitrogen (NOx) are precursors for the formation of ozone. Therefore, VOC emissions are considered when evaluating the rule applicability relating to the ozone standards. Bartholomew County has been designated as attainment or unclassifiable for ozone. Therefore, VOC and NOx emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

(b) Bartholomew County has been classified as attainment or unclassifiable for all remaining pollutants. Therefore, these emissions were reviewed pursuant to the requirements for Prevention of Significant Deterioration (PSD), 326 IAC 2-2 and 40 CFR 52.21.

Source Status

Existing Source PSD Definition (emissions after controls, based on 8,760 hours of operation per year at rated capacity and/or as otherwise limited):

Pollutant	Emissions (ton/yr)
PM	8.8
PM10	8.8
SO_2	0.1
VOC	89.35
CO	4.2
NO_x	19.8

(a) This existing source is not a major stationary source because no attainment regulated pollutant is emitted at a rate of 250 tons per year or more, and it is not in one of the 28 listed source categories.

(b) These emissions were based on the 1998 OAM emissions data for this source.

Proposed Modification

PTE from the proposed modification (based on 8,760 hours of operation per year at rated capacity including enforceable emission control and production limit, where applicable):

Pollutant	PM (ton/yr)	PM10 (ton/yr)	SO_2 (ton/yr)	VOC (ton/yr)	CO (ton/yr)	NO_x (ton/yr)
Boiler B5	0.004	0.016	0.001	0.012	0.177	0.21
current source wide potentials	45.28	0.09	-	94.27	0.8	3.8

Total	45.284	0.106	0.001	94.282	0.977	4.01
MSOP Threshold Level	100	100	100	100	100	100

This modification to an existing minor stationary source is not major because the emissions increase does not increase any criteria pollutant to more than 99 tons per year.

Part 70 Permit Determination

326 IAC 2-7 (Part 70 Permit Program)

This existing source, including the emissions from this permit, 005-11802-00066, is not subject to the Part 70 Permit requirements because the potential to emit (PTE) of:

(a) each criteria pollutant is less than 100 tons per year,
(b) a single hazardous air pollutant (HAP) is less than 10 tons per year, and
(c) any combination of HAPs is less than 25 tons/year.

This status is based on all the air approvals issued to the source. This status has been verified by the OAM inspector assigned to the source.

Federal Rule Applicability

(a) There are no New Source Performance Standards (NSPS)(326 IAC 12 and 40 CFR Part 60) applicable to this source.

(b) There are no National Emission Standards for Hazardous Air Pollutants (NESHAPs)(326 IAC 14 and 40 CFR Part 63) applicable to this source.

State Rule Applicability - Entire Source

326 IAC 5-1 (Opacity Limitations)

Pursuant to 326 IAC 5-1-2 (Opacity Limitations), except as provided in 326 IAC 5-1-3 (Temporary Alternative Opacity Limitations), opacity shall meet the following, unless otherwise stated in this permit:

(a) Opacity shall not exceed an average of forty percent (40%) any one (1) six (6) minute averaging period as determined in 326 IAC 5-1-4.

(b) Opacity shall not exceed sixty percent (60%) for more than a cumulative total of fifteen (15) minutes (sixty (60) readings) as measured according to 40 CFR 60, Appendix A, Method 9 or fifteen (15) one (1) minute nonoverlapping integrated averages for a continuous opacity monitor) in a six (6) hour period.

State Rule Applicability - Individual Facilities

326 IAC 6-2-4 (Emission Limitations for facilities specified in 326 IAC 6-2-1(d))

Pursuant to 326 IAC 6-2-4(a)(Emission limitations for facilities specified in 326 IAC 6-2-1(c)), the particulate matter emissions from the 0.48 MMBtu per hour boiler (B-5) shall not exceed 0.6 pounds of PM per MMBtu because for Q less than 10 MMBtu per hour, Pt shall not exceed 0.6 MMBtu per hour where:

Pt= Pounds of particulate matter emitted per million Btu (lb/mmBtu) heat input.
Q= Total source maximum operation capacity rating in million Btu per hour (mmBtu/hr).

In this case, the total source maximum operation capacity, 9.18, is less then 10 MMBtu per hour. Q is calculated by adding the heat input of the new boiler and the heat input from the previous existing boilers at the source.

Since the potential emission rate of 0.0009 pounds per hour of PM when burning natural gas is less than the allowable emission rate of 0.29 pounds per hour, boiler B5 is in compliance with 326 IAC 6-2-4. See the spreadsheet in Appendix A for boiler B5.

Air Toxic Emissions

Indiana presently requests applicants to provide information on emissions of the 188 hazardous air pollutants (HAPs) set out in the Clean Air Act Amendments of 1990. These pollutants are either carcinogenic or otherwise considered toxic and are commonly used by industries. They are listed as air toxics on the Office of Air Management (OAM) Construction Permit Application Form Y.

None of the listed air toxics will be emitted from the water heating boiler.

Conclusion

The construction and operation of this water heating boiler shall be subject to the conditions of the attached proposed **Exemption 005-11802-00066**.

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler B5

Company Name: **NTN Driveshaft, Inc.**
Address City IN Zip: **8251 South International Drive**
Plt ID: **00066**
Reviewer: **Melissa Groch**
Exemption: **005-11802-00066**

Heat Input Capacity MMBtu/hr	Potential Throughput MMCF/yr
0.48	4.2

	Pollutant					
	PM*	PM10*	SO2	NOx	VOC	CO
Emission Factor in lb/MMCF	1.9	7.6	0.6	100.0 **see below	5.5	84.0
Potential Emission in tons/yr	0.004	0.016	0.001	0.210	0.012	0.177

*PM emission factor is filterable PM only. PM10 emission factor is filterable and condensable PM10 combined.
**Emission Factors for NOx: Uncontrolled = 100, Low NOx Burner = 50, Low NOx Burners/Flue gas recirculation = 32

Methodology

All emission factors are based on normal firing.
MMBtu = 1,000,000 Btu
MMCF = 1,000,000 Cubic Feet of Gas

Potential Throughput (MMCF) = Heat Input Capacity (MMBtu/hr) x 8,760 hrs/yr x 1 MMCF/1,000 MMBtu
Emission Factors are from AP 42, Chapter 1.4, Tables 1.4-1, 1.4-2, 1.4-3, SCC #1-02-006-02, 1-01-006-02, 1-03-006-02, and 1-03-006-03 (SUPPLEMENT D 3/98)
Emission (tons/yr) = Throughput (MMCF/yr) x Emission Factor (lb/MMCF)/2,000 lb/ton

Appendix A: Emissions Calculations
Natural Gas Combustion Only
MM BTU/HR <100
Small Industrial Boiler
HAPs Emissions

Company Name:
Address City IN Zip:
CP:
Plt ID:
Reviewer:
Date:

HAPs - Organics

	Benzene	Dichlorobenzene	Formaldehyde	Hexane	Toluene
Emission Factor in lb/MMcf	2.1E-03	1.2E-03	7.5E-02	1.8E+00	3.4E-03
Potential Emission in tons/yr	4.415E-06	2.523E-06	1.577E-04	3.784E-03	7.148E-06

HAPs - Metals

	Lead	Cadmium	Chromium	Manganese	Nickel
Emission Factor in lb/MMcf	5.0E-04	1.1E-03	1.4E-03	3.8E-04	2.1E-03
Potential Emission in tons/yr	1.051E-06	2.313E-06	2.943E-06	7.989E-07	4.415E-06

Methodology is the same as page 1.

The five highest organic and metal HAPs emission factors are provided above.
Additional HAPs emission factors are available in AP-42, Chapter 1.4.